

(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

(11) Publication number: **58163403 A**

(43) Date of publication of application: **28.09.1983**

(51) Int. Cl **B01D 13/00**
 B01D 53/22

(21) Application number: **57046870**
(22) Date of filing: **23.03.1982**

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(54) GAS SEPARATION MEMBRANE

(57) Abstract:

PURPOSE: To obtain a gas separation membrane excellent in oxygen permeability, by using a polyurethane/silicone copolymer of which the Si-O content is increased by introducing a polysiloxane structure into the main chain of polyurethane.

CONSTITUTION: A substantially linear polyurethane/silicone

copolymer obtained by heating and reacting diisocyanate, α , ω -dichloropolydiorganosiloxane and glycol in an org. solvent is dissolved in a film forming liquid solvent to be cast and applied to an appropriate support and the solvent is evaporated from the formed film by heat treatment to obtain a homogenous membrane with a thickness of $0.05\text{W}30\mu\text{m}$. By subjecting the surface of this membrane to sputter etching treatment, coefficient of gas permeation and coefficient of gas separation thereof are further enhanced.

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